

Application No. 10/577,914  
Amendment dated August 26, 2011  
Reply to Office Action of June 8, 2011

**REMARKS**

**Reconsideration And Allowance  
Are Respectfully Requested.**

Claims 1, 3-10, 15 and 16 are currently pending. Claims 1, 8 and 9 have been amended. Claim 11 has been canceled by way of the present amendment. Claims 2 and 12-14 were previously canceled. No new claims have been added. No new matter has been added. Reconsideration is respectfully requested.

Claims 8 and 9 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have addressed these rejections by amending the pending claims and removing the word approximately and the claims are now believed to comply with § 112. Accordingly, Applicants respectfully request the rejection thereof be withdrawn.

With regard to the rejections based upon the cited references, claims 1, 3-10, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over German Patent No. DE10135198 to Hutmann ("Hutmann") in view of PCT Publication No. WO03/069001 to Kondoh ("Kondoh") or, in the alternative, Kondoh in view of Hutmann. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hutmann in view of Kondoh or, in

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the alternative, over Kondoh in view of Hutmann, and further in view of U.S. Patent No. 3,415,697 to Bredzs ("Bredzs"). These rejections are respectfully traversed in view of the preceding amendments and the remarks which follow.

Claim 1 has been amended to incorporate the language of claim 11, wherein after adding the granulate of the silicon or of the silicon alloy a heating rate of the thixomolding step is reduced when a melt first forms.

Claim 1 has been amended to define a process for producing metal-matrix composite materials comprising at least one portion of magnesium or of a magnesium alloy as the metal component of the composite. The process includes producing the matrix component by thixomolding a granulate of magnesium or of a magnesium alloy and a granulate of a silicon or of a silicon alloy to produce an  $Mg_2Si$  phase with a volumetric content of at least 2% dispersed into and thereby forming the metal-matrix composite material, wherein after adding the granulate of the silicon or of the silicon alloy to the granulate of magnesium or a magnesium alloy, a heating rate of the thixomolding step is reduced when a melt first forms. The step of thixomolding includes shearing to form an at least partially liquid melt.

Considering amended claim 1, it is Applicants' opinion that the references taken alone or in combination do not disclose the step of "after adding the silicon or silicon alloy a heating rate of the thixomolding step is reduced when a melt first forms". Bredzs has nothing to with thixomolding processes. Bredzs, as indicated in the action, merely discloses a brazing process

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with mixing of aluminum based alloys AlMg and AlSi. Brazing is not equivalent or analogous to thixomolding. Further, there is no teaching that “after adding the granulate of silicon or silicon alloy to a granulate of magnesium or magnesium alloy a heating rate of the thixomolding step is reduced when a melt first forms”. Bredzs does not discuss thixomolding of granulates to form magnesium based metal-matrix composites, nor does it discuss or contemplate “heating rate”. If the Office believes that such step is “obvious” to one of ordinary skill in the art, Applicants request that the Examiner produce a teaching in the sense of granulates forming a matrix and thixomolding with a magnesium metal.

Accordingly, it is Applicants’ opinion that amended claim 1 overcomes Hutmann in view of Kondoh, or Kondoh in view of Hutmann, in further view of Bredzs, and Applicants respectfully request all rejections relating thereto be withdrawn. Bredzs is silent as to the heating rate in a thixomolding process nor is there any contemplated motivation to use anything taught in Bredzs in the thixomolding process as set forth in amended claim 1. The reduction of the heating rate causes less internal stresses or warping of the end products to occur. As to those claims dependent upon independent claim 1, they are also believed to overcome the cited references for at least the reasons discussed above and Applicants respectfully request these rejections also be withdrawn.

The claim amendments made with this response do not indicate agreement with the Examiner’s rejection, and all previous arguments and traversals are maintained. The

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amendments made in this response are made to further prosecution on the merits, and without prejudice to the Applicant filing one or more continuation applications having claims as originally or previously presented.

It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested. If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicants' representative at the below number.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Stewart L. Gitler', written in a cursive style.

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